

REMARKS

Claims 14-21, 31-38 and 45-61 are pending in the application. Claim 53 is amended.

Claim 53 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner indicates that it is uncertain as to whether the recited "chamber housing" refers to a substrate processing chamber or a plenum chamber. Without admission as to the propriety of the Examiner's statements applicant has amended claim 53 to recite the chamber housing of the substrate processing chamber. Accordingly, applicant respectfully requests withdrawal of the § 112 rejection of claim 53 in the Examiner's next action.

Claims 14-17, 19-21, 31-32, 34 and 37-38 stand rejected under 35 U.S.C. § 102(a) as being anticipated by Srivastava (U.S. Patent No. 6,225,745). In accordance with MPEP § 2131, anticipation requires each and every element of a claim to be disclosed in a single prior art reference. Each of claims 14-17, 19-21, 31-32, 34, 37 and 38 are allowable over Srivastava for at least the reason that the reference fails to disclose each and every element in any of those claims.

Independent claim 14 recites a manifold assembly comprising a body having a plenum chamber. Claim 14 additionally recites first and second precursor feed streams on the manifold body at precursor inlets, and a purge gas stream on the manifold body at an inlet which is upstream of the precursor inlets and angled relative to the precursor inlets such that a purge gas flow through the purge gas inlet provides a venturi effect within the plenum chamber relative to the first and second precursor inlets. At page 3 of the present action the Examiner indicates that Srivastava discloses a plenum chamber indicating that

such is “inherent to convey gases”. However, nothing in the Srivastava disclosure teaches a plenum chamber to support the contention of the Examiner. Nor has the Examiner provided support for the contention of inherency. The Examiner is again encouraged to review the Board of Patent Appeals and Interferences decision in Appeal Number 03-0877 regarding Patent Application Serial No. 09/601,884 where the Appeal Board found Examiner error where the Examiner failed to provide evidence that a channel disclosed in a reference could be defined to include a plenum chamber. The Examiner’s present reliance upon Srivastava as showing a plenum chamber is similarly unsupported and rejection based upon such contention is accordingly unfounded. If the present rejection is to be maintained, applicant respectfully requests direction to appropriate support for such rejection to allow applicant to fully address the issue.

The Examiner further indicates that applicant’s recited limitation of precursor inlets, precursor gases, purge gases and purge gas inlets are being treated by the Examiner as intended use rather than structural limitations and are considered not to limit the scope of the claims. The Examiner indicates reliance upon the Walter decision (*In re Walter* 618 F.2d at 769,205 USPQ at 409 and MPEP § 2106). Applicant again notes that claim 14 clearly recites precursor inlets and purge gas inlets as structural limitation within the body of the claim. The Walter case relied upon by the Examiner pertains to treating 35 U.S.C. § 112, sixth paragraph, and determination of equivalence for means-plus-function claims. Since claim 14 is not a means-plus-function claim, analysis under the Walter decision is inappropriate. The Examiner’s reading out of structural distinction between purge gas inlets and process chemical inlets is unfounded and rejection upon such grounds is improper. If the present rejection is to be maintained, applicant requests appropriate

supporting authority to be indicated by the Examiner to allow applicant to address the issue.

The Examiner indicates reliance upon Srivastava as disclosing a gas flow inlet providing a venturi effect within a plenum chamber relative to other gas flow inlets. This contention is entirely unsupported by the Srivastava disclosure since such disclosure fails to even teach or suggest a plenum chamber. The Examiner goes as far as to indicate that the structure taught in the reference is substantially identical to that of the claims and therefore the venturi effect is presumed to be inherent. Since Srivastava fails to disclose or suggest a plenum chamber and additionally fails to disclose or suggest the claim 14 recited configuration of precursor feed streams and purge gas streams in fluid communication with the plenum chamber, the Examiner's holding of inherency is entirely unfounded since there is no supporting basis in the relied upon reference.

Claims 15-17 and 19-21 are allowable over Srivastava for at least the reason that they depend from allowable base claim 14.

Independent claim 31 recites a purge gas inlet into a plenum chamber which is upstream of plenum chamber precursor inlets. Accordingly, claim 31 is allowable over Srivastava for at least reasons similar to those discussed above with respect to independent claim 14. Claim 31 additionally recites a plenum chamber outlet opposing the purge gas inlet where the body comprising the plenum chamber has a structure configured to mount the second end of the plenum chamber to a substrate processing chamber. Referring to Srivastava Fig. 1b which is indicated by the Examiner as being relied upon, it is noted that gas box 12 is depicted as being configured for providing gas into a plasma tube 32b. Such does not in any way disclose the claim 31 recited plenum chamber outlet disposed at a second end configured to connect with a substrate processing chamber.

Accordingly, claim 31 is not anticipated by Srivastava and is allowable over this reference. Dependent claims 32, 34 and 37-38 are allowable over Srivastava for at least the reason that they depend from allowable base claim 31.

Claims 18, 33 and 35-36 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Srivastava in view of Onda (U.S. Patent No. 5,395,482). The Examiner is reminded by direction to MPEP § 2143 that a proper obviousness rejection has the following three requirements: 1) there must be some suggestion or motivation to modify or combine reference teachings; 2) there must be a reasonable expectation of success; and 3) the combined references must teach or suggest all of the claim limitations. Claims 18, 33 and 35-36 are allowable over Srivastava and Onda for at least the reason that the references, individually or in combination, fails to disclose or suggest each and every element in any of those claims.

As set forth above, Srivastava fails to disclose each and every element in the independent claims 14 and 31. Further, the Srivastava disclosure does not suggest the claims 14 and 31 recited plenum chamber, venturi effect, configuration of purge gas and precursor streams and outlets as recited in these independent claims. With respect to claim 18 the Examiner indicates reliance upon Onda as disclosing a 3-way valve. However, the disclosed 3-way valve of Onda does not in any way contribute toward suggesting the features of independent claim 14 which are neither taught nor suggested by Srivastava. Accordingly, independent claim 14 is not rendered obvious by the combination of Srivastava and Onda and claim 18 is allowable for at least the reason that it depends from allowable base claim 14.

At pages 10-11 of the action the Examiner indicates reliance upon Onda as disclosing a flange and/or 3-way valves as recited in claims that depend from independent

claim 31. However, disclosure of a flange or 3-way valves does not contribute toward suggesting the features discussed above of independent claim 31 which Srivastava fails to disclose or suggest. Accordingly, independent claim 31 is not rendered obvious by the combination of Srivastava and Onda and dependent claims 33, 35 and 36 are allowable over such combination for at least the reason that they depend from an allowable base claim.

Claims 45-61 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Srivastava and Onda. Independent claim 45 recites an elongate body comprising an elongate plenum chamber having a plurality of precursor inlets received along the longitudinal axis. Claim 45 further recites a purge gas inlet into the plenum chamber at a first longitudinal axis end which is upstream of all precursor inlets to the plenum chamber. Claim 45 also recites that each of the precursor feed streams and purge gas streams comprise elongated segments joining with their respective inlets. As indicated above with respect to claims 14 and 31 the combination of Srivastava and Onda fails to disclose or suggest the recited plenum chamber or the recited feed streams on the body comprising the plenum chamber. Claim 45 additionally recites that the purge gas stream elongated segment which joins with the purge gas inlet is substantially aligned on the longitudinal axis of the plenum chamber. This additional feature is not disclosed or suggested by Srivastava and Onda considered individually or in combination. Independent claim 45 is therefore not rendered obvious by the combination of Srivastava and Onda and is allowable over these references.

Dependent claims 46-61 are allowable over Srivastava and Onda for at least the reason that they depend from allowable base claim 45.

For the reasons discussed above, pending claims 14-21, 31-38 and 45-61 are allowable. Applicant respectfully requests formal allowance of such pending claims in the Examiner's next action.

If any of the present rejections are to be maintained, applicant requests a telephone call to schedule an interview with the Examiner, preferably in the presence of the Examiner's supervisor.

Respectfully submitted,

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